UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,948	02/26/2004	Brian N. Pierce	022122-000410US	5787

20350 7590 07/18/2006

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
JOHNSON III, HENRY M	

ART UNIT	PAPER NUMBER
3739	

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/789,948	PIERCE, BRIAN N.	
	Examiner	Art Unit	
	Henry M. Johnson, III	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) *9-23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 May 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments filed 5/8/2006 have been fully considered but they are not persuasive. Nordquist et al. clearly teach a method of treating diseased tissue using radiation with a wavelength that is absorbed selectively by the diseased tissue. The only positively cited step of the independent claim is irradiating a portion of a living organism. The presence of a photosensitizer to alter the absorption wavelength of the diseased tissue does not have any impact on the action of irradiating. The applicant's specification discloses steps for determining the absorption of the healthy and diseased tissue, but no such steps are claimed. There is no requirement that the absorption characteristics are limited to endogenous elements. Had such a limitation been present, different prior art rejections would have been provided (Mills, Harte et al. or Spertell)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 6,149,671 to Nordquist et al. Nordquist et al. disclose a method for treating a neoplasm, such as a malignant tumor, in humans and other animals. A chromophore and an immunoadjuvant are introduced into the neoplasm. The neoplasm is then lased at an irradiance sufficient to induce neoplastic cellular destruction and to stimulate the self-immunological defense system against neoplastic cellular multiplication (abstract). A malignant tumor, is injected with a solution containing a chromophore. A low

energy laser emitting a wavelength of radiation complementary to that of the chromophore is then focused on the neoplasm for a duration sufficient to elevate the temperature of the neoplasm to a level that induces neoplastic cellular destruction and stimulates the self-immunological defense system against neoplastic cellular multiplication (Col. 6, lines 1-11). The wavelength selected is not readily absorbed by normal tissue, so collateral damage is reduced (Col. 6, lines 58-61). Nordquist et al. teach radiation wavelengths from 150 to 2000 nanometers (Col. 8, line 27), although indocyanine green is specifically cited with a known absorption between 500 and 1100 nanometers. Nordquist et al. teach raising the temperature of the tumor by 40 °C above normal while maintaining the non-target tissue at temperatures about 20 °C less (Col. 12, lines 49-52). A fiber optic may be used for delivery of the radiation (Col. 6, line 67).

Regarding claims 3 and 4, Nordquist et al. claims treatment of malignant tumors. This is interpreted as being a generic treatment regardless of the tumor location.

Nordquist et al. achieves different absorption levels by the introduction of a chromophore. It is well known in the art to use endogenous chromophores such a hemoglobin or porphyrin in the targeting of light therapy in tissue. It is therefore obvious to take such endogenous chromophores into consideration.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 4,815,447 to Mills teaches frequency selective radiation therapy providing selective tissue damage or necrosis by irradiating a component element of the target tissue at the corresponding Mossbauer absorption frequency. U.S. Patent 3,693,623 to Harte et al. discloses the use of selected wavelengths to protect adjoining tissue during radiation. U.S.

Patent 6,104,959 to Spertell teaches radiation wherein the frequency chosen preferentially interacts with the target as opposed to adjacent tissue.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Henry M. Johnson, III whose telephone number is (571) 272-4768. The examiner can normally be reached on Monday through Friday from 6:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Henry M. Johnson, III
Primary Examiner
Art Unit 3739